1.	(Twice Amended) One or more computer-readable media having stored thereon a computer program that, when executed by one or more processors of the computer, causes the one or more processors to perform acts including:

identifying a plurality of viewing rays to be used to construct, based on previously captured concentric mosaics, a view image of a scene represented by the concentric mosaics;

checking whether each of the plurality of viewing rays coincides with at least a portion of a captured image;

for each viewing ray that coincides with at least a portion of a captured image, selecting the portion of the captured image;

for each viewing ray that does not coincide with at least a portion of a captured image, generating an interpolated portion by interpolating between at least two portions of one or more captured images based on a constant distance to objects in the scene; and

combining the selected and interpolated portions to generate the view image.

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7.	(Amended) One or more computer-readable media having stored thereon a computer program that, when executed by one or more processors of the computer, causes the one or more processors to perform acts including:

identifying a plurality of viewing rays to be used to construct, based on a previously captured mosaic, a view image of a scene represented by the mosaic,

wherein each of the plurality of viewing rays extends from a viewing point within a circular region defined by the mosaic;

checking whether each of the plurality of viewing rays coincides with at least a portion of a captured image;

for each viewing ray that coincides with at least a portion of a captured image, selecting the portion of the captured image;

for each viewing ray that does not coincide with at least a portion of a captured image, generating an interpolated portion by interpolating between at least two portions of one or more captured images based on a constant distance to objects in the scene; and

combining the selected and interpolated portions to generate the view image.

23.   (Twice Amended) A method comprising:

generating, from concentric mosaics and based on a plurality of viewing rays, a plurality of image values for a view of a scene;

using, as a first set of image values for the view, at least a portion of a captured image; and

using, as a second set of image values for the view, interpolated values generated by interpolating between at least two portions of one or more captured images based on a constant distance to objects in the scene.

32.   (Twice Amended) A system comprising:

an observer interface to receive user input commands and identify a viewpoint and a direction of viewing based on the input commands; and

a view renderer, communicatively coupled to the observer interface, to receive the viewpoint and the direction of viewing, to generate values based on previously captured concentric mosaics for a portion of an image of a scene represented by the concentric mosaics, and to interpolate between at least two captured images based on a constant distance to objects in the scene.